

STORMS AND WEATHER WARNINGS

WASHINGTON FORECAST DISTRICT

The only storm warnings of the month were displayed from Delaware Breakwater to Eastport, Me., at 10 p. m. of the 24th in connection with a disturbance of considerable intensity that moved eastward over the southern Lake region. The highest wind velocities reported were 36 miles an hour from the northeast at Eastport and 48 miles from the northwest at New York City.

Small-craft warnings were displayed from Delaware Breakwater to Boston on the 16th; from Sandy Hook to Eastport on the 18th; and from Delaware Breakwater to Block Island, R. I., on the 25th.

Except for warnings of light frost in the cranberry bogs of New Jersey on the 11th, no frost warnings were issued during the month.—*C. L. Mitchell.*

CHICAGO FORECAST DISTRICT

Storm warnings.—No storms of major character occurred on the Great Lakes during the month, but there were several disturbances of more or less minor force that were attended by winds that just reached or slightly exceeded (for short periods as a rule) the velocities considered as of storm strength. Most of the disturbances referred to affected only the upper Lakes. In the majority of cases the conditions were covered by small-craft warnings, but in a few instances storm warnings were issued.

On the afternoon of the 9th winds of just about verifying force were attained over virtually all the upper Lakes section in connection with a disturbance that had moved from the southeastern slope of the Rocky Mountains to the Red River of the North Valley, whence a path was taken that carried the center north of Lake Superior on the date in question. Southwest storm warnings had been issued on the afternoon of the preceding date for most of the upper Lake districts, but the warnings were taken down the same night when it appeared that the disturbance was losing energy. A redevelopment took place that night, however, and small-craft warnings were advised on the morning of the 9th for the upper Lakes.

On the night of the 11th northeast warnings were issued for Lake Superior, and southeast warnings for Lake Michigan. At that time a trough of low pressure of some depth covered the Plains area, while at the same time a marked high pressure area overlay the Northeast. On the morning of the 12th southwest warnings were issued for Lake Huron. All warnings were justified, since verifying velocities occurred along the west shore of Lake Michigan, and near verifying velocities elsewhere.

The final disturbed period of the month covered the 24-26. On the date first mentioned a moderate barometric depression moved from the Middle West to the lower Lake region, increasing in energy as it progressed; while a second disturbance moved southeastward from the Northwest on the 25th in rapid succession, it likewise increasing in force as it advanced. The wind attained the strength of a moderate storm over most of Lake Superior, but elsewhere no verifying velocities were reached. Messages either of an advisory character or small craft warnings were issued in this connection.

Frost warnings.—A few frost warnings were issued, but these were in most cases for districts of little agricultural importance, and consequently the warnings were of little economic value. The warnings in question were those of the 10th and 27th for northern Michigan; and on the 13th, for northwestern Wyoming; and from the 26th to the 29th, for either all or portions of the Wis-

consin cranberry section. Some frost occurred in the bogs on two or three nights within the period mentioned, but no damage resulted.

Fire-weather forecasts.—Those to the State Forester at St. Paul, Minn., were discontinued temporarily, on the 10th, at which time the critical conditions in the Minnesota area had passed. Upon request by the Forester the forecasts will be continued during the next fire period.—*C. A. Donnel.*

NEW ORLEANS FORECAST DISTRICT

The prevailing movement of barometric depressions that formed in the Southwest was toward the extreme north-central portion of the country and no well-defined disturbance passed across the west Gulf district. Conditions were mostly favorable for local showers along the coast and much hot, dry weather in the interior.

No storm warnings were issued or needed. Small-craft warnings were displayed on the east coast of Texas on the 12th and were justified.—*R. A. Dyke.*

DENVER FORECAST DISTRICT

The persistent high barometric pressure that characterized the month in the Eastern and Southern States was accompanied by the development of an unusually large number of low-pressure areas over the western half of the country, especially in Colorado and New Mexico. Only three of these southwestern lows attained sufficient energy to pass eastward out of the district, and two of them progressed no farther than the Missouri Valley. The presence of so many lows, fluctuating both in intensity and position, was reflected in the remarkably unstable temperature conditions for which the month was notable in this district.

While generally unsettled conditions prevailed, with local showers somewhere in the district nearly every day, the only period of general precipitation was from the 19th to 21st, when showers occurred over most of Colorado, New Mexico, southern Utah, and eastern Arizona.

Because of active lows in Arizona or eastern New Mexico, fire-weather warnings for the forests of Arizona, New Mexico, and southern Utah were issued on the 3d, 5th, 6th, and 17th, all of which, except the last, were followed by wind velocities sufficiently high over the regions specified to render the fire hazard very great.—*E. B. Gittings, jr.*

SAN FRANCISCO FORECAST DISTRICT

The weather in this district during the month of June was marked by two entirely different types. During the first part of the month the barometric pressure, with but little interruption, remained low over the North Pacific States and northern Plateau region, while the Pacific Ocean HIGH was central between the California coast and Hawaiian Islands. This distribution of pressure caused generally cloudy and cool weather with frequent rains in the western portions of Washington and Oregon, the northern Plateau region, and the extreme northern portion of California, and cool weather with considerable cloudiness in other portions of the district.

This condition greatly delayed the maturing of both grain and fruit crops in California, and at times caused considerable anxiety concerning the probable yield of each. On the 3d, 4th, and 10th frosts occurred in the northern Plateau region.

During the latter part of the second decade there was a marked change in the pressure distribution. The Pacific Ocean HIGH moved farther north and a portion